

ABSTRACT

Method for producing an embossing roller from silicone rubber for the continuous embossing of the surface of a thermoplastic film, with the embossing surface having a negative form of a surface structure to be embossed. An auxiliary roller is provided which is plastic, at least in the region of its circumferential surface. A laser beam is directed onto the circumferential surface and controlled for defining a real imaginary pattern in such a way that a surface structure of the pattern is created as a positive form on the surface. A layer of silicone rubber provided on the surface produces an embossing matrix which is pulled off the surface, turned inside out, and adhered to a surface of an embossing roller, with the negatively structured embossing surface facing outward. Thus, multiple embossing matrices can be created after a one-time structuring of the surface of an auxiliary roller, using a casting process.

14
13
12
11
10
9
8
7
6
5
4
3
2
1
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100